

Submission under 37 C.F.R. §1.114  
Application No. 10/527,694  
Attorney Docket No. 052203

### **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions of claims in the application.

#### **Listing of Claims**

Claims 1-3 (cancelled)

Claim 4 (currently amended): A crosslinked high-molecular-weight product obtained by crosslinking a high-molecular-weight compound with a biological low-molecular-weight compound, the crosslinked high-molecular-weight product comprising a gel that is metabolized in vivo after application in vivo,

wherein the high-molecular-weight compound is at least one of proteins, glycosaminoglycans, chitosans, polyamino acids and polyalcohols,

wherein the biological low-molecular-weight compound is obtained by modifying at least one carboxyl group of malic acid, oxalacetic acid, citric acid, or *cis*-aconitic acid with N-hydroxysuccinimide or N-hydroxysulfosuccinimide.

Claim 5 (cancelled)

Claim 6 (previously presented): The crosslinked high-molecular-weight product according to claim 4, wherein the high-molecular-weight compound is a glycosaminoglycan

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comprising chondroitin sulfate, dermatan sulfate, hyaluronic acid, heparan sulfate, heparin, or keratan sulfate.

Claim 7 (previously presented): The crosslinked high-molecular-weight product according to claim 4, wherein the high-molecular-weight compound is a protein comprising collagen, atelocollagen, alkali-soluble collagen, gelatin, keratin, serum albumin, egg albumin, hemoglobin, casein, globulin, or fibrinogen.

Claims 8-10 (cancelled)

Claim 11 (currently amended): A method for producing a crosslinked high-molecular-weight product comprising:

reacting 0.001 to 10 percent by weight of malic acid, oxalacetic acid, citric acid, or *cis*-aconitic acid with 0.001 to 10 percent by weight of N-hydroxysuccinimide or N-hydroxysulfosuccinimide in the presence of 0.001 to 20 percent by weight of carbodiimide at a reaction temperature of 0°C to 100°C for a reaction time of 1 to 48 hours to modify at least one carboxyl group of the malic acid, oxalacetic acid, citric acid or *cis*-aconitic acid with N-hydroxysuccinimide or N-hydroxysulfosuccinimide to obtain a biological low-molecular-weight compound; and

crosslinking a high-molecular-weight compound with the biological low-molecular-

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weight compound so as to yield a crosslinked high-molecular-weight compound comprising a gel that is metabolized *in vivo* after application *in vivo*

wherein the high-molecular-weight compound is at least one of proteins, glycosaminoglycans, chitosans, polyamino acids and polyalcohols.

Claim 12 (currently amended): A method for using a [[the]] crosslinked high-molecular-weight product ~~according to claim 4~~, comprising: [[for]]

applying the crosslinked high-molecular-weight product according to claim 4 to one of biological adhesives, hemostatic agents, materials for embolizing blood vessels, and sealing materials for aneurysm to perform crosslinking reaction directly at affected sites.

Claim 13 (currently amended): A method for using a [[the]] crosslinked high-molecular-weight product ~~according to claim 4~~, comprising: [[for]]

applying the crosslinked high-molecular-weight product according to claim 4 to one of adhesion preventing agents, scaffolds for tissue regeneration, and drug carrier after performance of crosslinking reaction.

Claim 14 (new): The crosslinked high-molecular-weight product according to claim 4, wherein the crosslinked high-molecular-weight product includes a moiety derived from the biological low-molecular-weight compound.